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ABSTRACT

This study analyzed the effect of intrinsic and extrinsic job stressors on grades K through 12 physical education teachers. Perceived levels of stress were compared among physical education teachers when physical illness, psychological strain, and absenteeism were functions. Subjects were 47 physical education teachers randomly selected from the Florida public schools. Respondents were asked to complete a personal data sheet and a 50-item teacher stress inventory. The analysis of variance technique was used to analyze the data using three demographical variables. The demographical data served as the independent variables while the stress score (intrinsic and extrinsic) were the dependent variables. Results indicated that physical education teachers who experienced either physical illness or psychological strain during the school year had significantly higher levels of both intrinsic and extrinsic job-related stress than teachers who did not. Stress also appeared to be a significant factor among teachers who experienced excessive absenteeism from work. (Author/JD)

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ANALYSIS OF THE INTRINSIC AND EXTRINSIC STRESS FACTORS OF K-12 PHYSICAL EDUCATION TEACHERS

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ABSTRACT

THE PURPOSE OF THIS STUDY WAS TO ANALYZE THE EFFECT OF OF INTRINSIC AND EXTRINSIC JOB STRESSORS ON K-12 PHYSICAL EDUCATION TEACHERS. SPECIFICALLY, THIS STUDY COMPARED PERCEIVED LEVELS OF STRESS AMONG PHYSICAL EDUCATION TEACHERS WHEN PHYSICAL ILLNESS, PSYCHOLOGICAL STRAIN, AND ABSENTEEISM WERE FUNCTIONS. THE GENERAL HYPOTHESIS INVESTIGATED WAS THAT INTRINSIC AND EXTRINSIC JOB STRESSORS WOULD NOT HAVE AN EFFECT BETWEEN TEACHERS WHO DID AND THOSE WHO DID NOT EXPERIENCE PHYSICAL ILLNESS, PSYCHOLOGICAL STRAIN, OR ABSENTEEISM DURING THE SCHOOL YEAR.

METHODS

SUBJECTS WERE 47 PHYSICAL EDUCATION TEACHERS RANDOMLY SELECTED FROM THE PUBLIC SCHOOLS IN FLORIDA. EACH RESPONDENT WAS ASKED TO COMPLETE A PERSONAL DATA SHEET AND A 50 ITEM TEACHER STRESS INVENTORY. THE STRESS INVENTORY WAS CONSTRUCTED FOLLOWING THE SUMMATIVE MODEL WITH A 1-5 LIKERT SCALE AND PROVIDED INTRINSIC AND EXTRINSIC STRESS SCORES. THE STRESS INVENTORY HAD A TEST-RETEST RELIABILITIES RANGED FROM 0.60 to .87. THE ANALYSIS OF VARIANCE TECHNIQUE WAS USED TO ANALYZE THE DATA USING THREE DEMOGRAPHICAL VARIABLES. THE DEMOGRAPHICAL DATA SERVED AS THE INDEPENDENT VARIABLES WHILE THE STRESS SCORES (INTRINSIC AND EXTRINSIC) WERE THE DEPENDENT VARIABLES.

RESULTS

RESULTS INDICATED THAT PHYSICAL EDUCATION TEACHERS WHO EXPERIENCED EITHER PHYSICAL ILLNESS OR PSYCHOLOGICAL STRAIN DURING THE SCHOOL YEAR HAD SIGNIFICANTLY HIGHER LEVELS OF BOTH INTRINSIC AND EXTRINSIC STRESS THAN TEACHERS WHO HAD NOT EXPERIENCED PHYSICAL ILLNESS OR PSYCHOLOGICAL STRAIN. THE DATA ANALYSIS ALSO INDICATED THAT TEACHERS WHO WERE ABSENT FROM WORK SIX OR MORE DAYS HAD SIGNIFICANTLY HIGHER LEVELS OF STRESS, BOTH INTRINSICALLY AND EXTRINSICALLY.

CONCLUSIONS

ON THE BASIS OF THE DATA OF THIS STUDY, IT MAY BE CONCLUDED THAT BOTH INTRINSIC AND EXTRINSIC JOB STRESSORS ARE SIGNIFICANTLY AFFECTING K-12 TEACHERS WHO EXPERIENCE PHYSICAL ILLNESS AND PSYCHOLOGICAL STRAIN ON THE JOB. MOREOVER, STRESS APPEARS TO BE A SIGNIFICANT FACTOR AMONG TEACHERS WHO EXPERIENCE EXCESSIVE ABSENTEEISM FROM WORK.

METHODS

SUBJECT - A RANDOM SAMPLE OF 47 PHYSICAL EDUCATION TEACHERS WAS DRAWN FROM THE 67 COUNTY SCHOOL DISTRICTS IN FLORIDA.

DATA AND INSTRUMENTATION

IN ORDER TO TEST THE HYPOTHETICAL MODEL, A QUESTIONNAIRE WAS CONSTRUCTED AND ADMINISTERED TO 100 TEACHERS. THE QUESTIONNAIRE WAS DESIGNED TO ELICIT DEMOGRAPHIC INFORMATION AND PERCEIVED STRESS. THE TEACHER STRESS INVENTORY WAS CONSTRUCTED FOLLOWING THE SUMMATIVE MODEL WITH A 1-5 LIKERT SCALE WHICH PROVIDED INTRINSIC AND EXTRINSIC STRESS VARIABLES. OPERATIONALLY, INTRINSIC STRESS VARIABLES WERE DEFINED AS THOSE STRESSORS THAT WERE DIRECTLY RELATED TO THE ACTUAL PERFORMANCE OF THE JOB OF TEACHING AND EXTRINSIC STRESS VARIABLES WERE THOSE RELATED TO THE ENVIRONMENT IN WHICH THE JOB IS BEING PERFORMED. MOREOVER, INTRINSIC STRESS FACTORS WERE THOSE MEDIATED BY THE TEACHER WHILE EXTRINSIC STRESS FACTORS WERE THOSE EXTERNALLY MEDIATED BY SOMEONE OTHER THAN THE TEACHERS.

IN THE PRESENT STUDY THE 47 PHYSICAL EDUCATION TEACHERS WERE DIVIDED INTO GROUPS ACCORDING TO THEIR RESPONSES ON THE TEACHER STRESS INVENTORY. THE FOLLOWING HYPOTHESES STATED IN THEIR NULL FORM WERE TESTED:

1. THAT TEACHERS WHO EXPERIENCED AND TEACHERS WHO DID NOT EXPERIENCE PHYSICAL ILLNESS DO NOT DIFFER SIGNIFICANTLY ON INTRINSIC AND EXTRINSIC STRESS VARIABLES.

2. THAT TEACHERS WHO EXPERIENCED AND TEACHERS WHO DID NOT EXPERIENCE PSYCHOLOGICAL STRAIN DO NOT DIFFER SIGNIFICANTLY ON INTRINSIC AND EXTRINSIC STRESS VARIABLES.

3. THAT TEACHERS WHO WERE ABSENT FROM WORK THREE OR MORE DAYS AND TEACHERS WHO WERE NOT ABSENT FROM WORK DO NOT DIFFER SIGNIFICANTLY ON INTRINSIC AND EXTRINSIC STRESS VARIABLES.

DATA WERE ANALYZED USING A ONE-WAY ANALYSIS OF VARIANCE TECHNIQUE WITH INTRINSIC AND EXTRINSIC STRESS SCORES SERVING AS THE DEPENDENT VARIABLE. THE NUMBER OF DAYS ABSENT FROM WORK AND THE NUMBER OF TEACHERS WHO EXPERIENCED PHYSICAL ILLNESS AND PSYCHOLOGICAL STRAIN SERVED AS THE INDEPENDENT VARIABLES. THE .05 LEVEL OF CONFIDENCE SERVED AS THE ACCEPTANCE OR REJECTION LEVEL OF AN EFFECT.

SUMMARY AND CONCLUSIONS

THE PURPOSE OF THIS STUDY WAS TO ANALYZE THE EFFECT OF INTRINSIC AND EXTRINSIC JOB STRESSORS ON K-12 PHYSICAL EDUCATION TEACHERS. THE GENERAL HYPOTHESIS INVESTIGATED WAS THAT INTRINSIC AND EXTRINSIC JOB STRESSORS WOULD NOT HAVE AN EFFECT ON TEACHERS WHO EXPERIENCED PHYSICAL ILLNESS, PSYCHOLOGICAL STRAIN OR ABSENTEEISM DURING THE SCHOOL YEAR.

SUBJECTS WERE 47 TEACHERS IN RANDOMLY SELECTED PUBLIC SCHOOLS OF FLORIDA. SUBJECTS WERE ASKED TO COMPLETE A QUESTIONNAIRE ON STRESS THAT INCLUDED A PERSONAL DATA SHEET AND A PERCEIVED STRESS INVENTORY. THE ANALYSIS OF VARIANCE TECHNIQUE WAS USED TO ANALYZE THE DATA WITH THREE DEMOGRAPHIC VARIABLES SERVING AS THE INDEPENDENT VARIABLES AND THE STRESS SCORES (INTRINSIC AND EXTRINSIC) SERVING AS THE DEPENDENT VARIABLES.

MEANS AND STANDARD DEVIATIONS FOR BOTH THE INTRINSIC AND EXTRINSIC STRESS SUB-SCORES ARE PRESENTED IN TABLES 1 AND 2.

SHOWN IN TABLES 3, 4, 5 AND 6 ARE DESCRIPTIVE DATA AND THE ANOVA SUMMARIES FOR THE PHYSICAL EDUCATION TEACHERS WHO HAD AND WHO HAD NOT EXPERIENCE PHYSICAL ILLNESS DURING THE SCHOOL YEAR. NOTE THAT THERE WAS A SIGNIFICANT DIFFERENCE BETWEEN THE TWO GROUPS OF TEACHERS. THE F-RATIO OF 6.04 AND 7.99 WERE SIGNIFICANT BEYOND THE .01 LEVEL OF CONFIDENCE. IN BOTH CASES, THE HYPOTHESES WERE REJECTED. THIS WAS INTERPRETED TO MEAN THAT TEACHERS WHO HAD INDICATED THAT THEY WERE

PHYSICALLY ILL EXPERIENCED HIGHER SIGNIFICANT LEVELS OF PERCEIVED STRESS, BOTH INTRINSICALLY AND EXTRINSICALLY.

AS SHOWN IN TABLES 7, 8, 9, AND 10, THE DESCRIPTIVE DATA AND THE ANOVA SUMMARIES ARE PRESENTED FOR THE 47 TEACHERS WHO INDICATED THAT THEY HAD OR HAD NOT EXPERIENCE PSYCHOLOGICAL STRAIN DURING THE SCHOOL YEAR. RESULTS OF THE ANALYSIS REVEALED A SIGNIFICANT DIFFERENCE BETWEEN THE TWO GROUPS OF TEACHERS. AS THE DATA SUGGEST, THE F-RATIOS OF 15.10 AND 8.66 WERE HIGHLY SIGNIFICANT AND BEYOND THE .01 LEVEL OF CONFIDENCE. THE HYPOTHESES WERE REJECTED. TEACHERS WHO EXPERIENCED PSYCHOLOGICAL STRAIN DURING THE SCHOOL YEAR HAD SIGNIFICANTLY HIGHER LEVELS OF INTRINSIC AND EXTRINSIC STRESS THAN TEACHERS WHO HAD NOT EXPERIENCED PSYCHOLOGICAL STRAIN.

SHOWN IN TABLES 11, 12, 13 AND 14 ARE THE DESCRIPTIVE DATA THE ANOVA SUMMARIES FOR TEACHERS WHO WERE ABSENT AND WHO WERE NOT ABSENT FROM WORK AS A RESULT OF THEIR PERCEIVED LEVEL OF STRESS. THE F-RATIOS OF 4.93 AND 3.97 WERE SIGNIFICANT BEYOND THE .05 LEVEL OF CONFIDENCE. AN INSPECTION OF TABLES 11 AND 13 REVEALED THAT TEACHERS WHO WERE ABSENT SIX OR MORE DAYS HAD ACHIEVED HIGHER STRESS SCORE MEANS THAN DID TEACHERS WHO HAD LESS ABSENCES FROM WORK. THE HYPOTHESES WERE REJECTED. THE INTERPRETATIONS OF TABLES 12 AND 14 WOULD INDICATE THAT TEACHERS WHO HAD EXCESSIVE ABSENTEEISM (SIX OR MORE DAYS) ALSO HAD HIGHER LEVELS OF STRESS BOTH INTRINSICALLY AND EXTRINSICALLY.

CONCLUSIONS

RESULTS OF THIS INVESTIGATION SEEM TO INDICATE THE FOLLOWING CONCLUSIONS:

1. THAT TEACHERS WHO EXPERIENCE PHYSICAL ILLNESS HAVE HIGHER LEVELS OF PERCEIVED STRESS BOTH INTRINSICALLY AND EXTRINSICALLY.
2. THAT TEACHERS WHO EXPERIENCE PSYCHOLOGICAL STRAIN HAVE HIGHER LEVELS OF PERCEIVED STRESS BOTH INTRINSICALLY AND EXTRINSICALLY.
3. THAT TEACHERS WHO ARE ABSENT FROM WORK SIX OR MORE DAYS HAVE HIGHER LEVELS OF PERCEIVED STRESS BOTH INTRINSICALLY AND EXTRINSICALLY.

TABLE 1

MEANS AND STANDARD DEVIATIONS
OF INTRINSIC STRESS SUB-SCORE VARIABLES

INTRINSIC STRESS SUB-SCORE VARIABLES	MEAN	SD
FEELING THAT YOU HAVE TO DO THINGS ON THE JOB THAT ARE AGAINST YOUR BETTER JUDGMENT.	10.05	3.81
HAVING THE REQUIREMENTS OF THE JOB IMPACT ON YOUR PERSONAL LIFE.	9.15	3.80
HAVING IDEAS CONSIDERABLY DIFFERENT FROM THOSE OF YOUR SUPERVISOR.	9.25	4.32
FEELING INADEQUATELY PREPARED TO HELP SOME STUDENTS.	8.64	2.79
NOT KNOWING WHAT TO TEACH IN MY CLASSES.	9.45	3.24
FEELING INADEQUATELY PREPARED TO HELP STUDENTS WITH LEARNING DEFICIENCIES.	8.06	2.63
LACK OF AN OPPORTUNITY TO SHARE EXPERIENCES AND FEELINGS WITH OTHERS.	10.31	3.53
LACK OF OPPORTUNITY TO EXPRESS TO OTHER TEACHERS MY NEGATIVE FEELING TOWARD STUDENTS.	7.23	3.14
FEELING INADEQUATE TO WORK WITH RACIAL ISSUES.	7.77	2.94

TABLE 2

MEANS AND STANDARD DEVIATIONS
OF EXTRINSIC STRESS SUB-SCORE VARIABLES

EXTRINSIC VARIABLES	MEAN	SD
SEVERE CUT IN THE SCHOOL FINANCIAL BUDGET.	8.49	3.40
OVERCROWDED CLASSROOMS.	11.57	3.88
NOT ENOUGH BOOKS AND SUPPLIES FOR TEACHING.	10.84	4.39
HAVING INADEQUATE TIME TO PROVIDE EMOTIONAL SUPPORT TO STUDENTS.	9.64	4.14
DIFFICULTY IS WORKING WITH TEACHERS ON A PROJECT.	12.10	4.85
RECEIVING INADEQUATE INFORMATION FROM THE PRINCIPAL REGARDING SCHOOL POLICIES.	8.50	2.76
TOO MANY NON-TEACHING TASKS REQUIRED.	10.21	3.84
NOT HAVING ENOUGH TIME TO COMPLETE ALL OF MY TEACHING TASKS.	8.08	3.56
NOT BEING ABLE TO GET THE INFORMATION NEEDED TO CARRY OUT MY TEACHING.	7.78	3.57
TOO HEAVY A WORKLOAD DURING THE SCHOOL DAY.	9.99	3.02

TABLE 3

MEANS AND STANDARD DEVIATIONS OF PHYSICAL EDUCATORS INTRINSIC STRESS VARIABLES BY PHYSICAL ILLNESS

PHYSICAL EDUCATORS	N	MEANS	SD
EXPERIENCED PHYSICAL ILLNESS	8	18.13	4.32
HAD NOT EXPERIENCE PHYSICAL ILLNESS	39	14.38	3.84
TOTAL	47		

TABLE 4

SUMMARY OF ANALYSIS OF VARIANCE FOR INTRINSIC STRESS VARIABLES BY PHYSICAL ILLNESS

SOURCE OF VARIATION	df	SS	MS	F-RATIO
BETWEEN GROUPS	1	92.87	92.87	6.04*
WITHIN GROUPS	45	692.11	15.38	
TOTAL	46	784.98		

*Significant at P=0.01

TABLE 5

MEANS AND STANDARD DEVIATIONS OF PHYSICAL EDUCATORS EXTRINSIC STRESS VARIABLES BY PHYSICAL ILLNESS

PHYSICAL EDUCATORS	N	MEANS	SD
EXPRIENCED PHYSICALL ILLNESS	8	30.13	7.68
HAD NOT EXPERIENCE PHYSICAL ILLNESS	39	22.69	6.59
TOTAL	47		

TABLE 6

SUMMARY OF ANALYSIS OF VARIANCE FOR EXTRINSIC STRESS VARIABLES BY PHYSICAL ILLNESS

SOURCE OF VARIATION	df	SS	MS	F-RATIO
BETWEEN GROUPS	1	366.73	366.73	7.99*
WITHIN GROUPS	45	2063.18	45.85	
TOTAL	46	2429.91		

*Significant at P=0.01

TABLE 7

MEANS AND STANDARD DEVIATION OF PHYSICAL EDUCATORS INTRINSIC VARIABLES BY PSYCHOLOGICAL STRAIN

PHYSICAL EDUCATORS	N	MEANS	SD
EXPERIENCED PSYCHOLOGICAL STRAIN	11	18.73	4.17
HAD NOT EXPERIENCE STRAIN	36	13.89	3.44
TOTAL	47		

TABLE 8

SUMMARY OF ANALYSIS OF VARIANCE FOR INTRINSIC VARIABLES BY PSYCHOLOGICAL STRAIN

SOURCE OF VARIATION	df	SS	MS	F-RATIO
BETWEEN GROUPS	1	197.24	197.24	15.10*
WITHIN GROUPS	45	587.74	13.06	
TOTAL	46	784.98		

*Significant at P=0.01

TABLE 9

MEANS AND STANDARD DEVIATIONS OF PHYSICAL EDUCATORS EXTRINSIC STRESS VARIABLES BY PSYCHOLOGICAL STRAIN

PHYSICAL EDUCATORS	N	MEANS	SD
EXPERIENCED PSYCHOLOGICAL STRAIN	11	29.18	7.80
HAD NOT EXPERIENCED PSYCHOLOGICAL STRAIN	36	22.36	6.39
TOTAL	47		

TABLE 10

SUMMARY OF ANALYSIS OF VARIANCE FOR EXTRINSIC STRESS VARIABLES BY PSYCHOLOGICAL STRAIN

SOURCE OF VARIATION	df	SS	MS	F-RATIO
BETWEEN GROUPS	1	391.97	391.97	8.66*
WITHIN GROUPS	45	2037.94	45.29	
TOTAL	46	2429.91		

*Significant at P=0.01

TABLE 11

MEANS AND STANDARD DEVIATIONS OF PHYSICAL EDUCATORS INTRINSIC STRESS VARIABLES BY ABSENTEEISM

NUMBER OF DAYS ABSENT	N	MEANS	SD
NO DAYS ABSENT	33	14.33	3.84
ONE TO FIVE DAYS ABSENT	12	15.33	3.20
SIX TO TEN DAYS ABSENT	1	23.00	0
ELEVEN OR MORE DAYS ABSENT	1	26.00	0
TOTAL	47		

TABLE 12

SUMMARY OF ANALYSIS OF VARIANCE FOR INTRINSIC STRESS VARIABLES BY ABSENTEEISM

SOURCE OF VARIATION	df	SS	MS	F-RATIO
BETWEEN GROUPS	3	200.98	66.99	4.93*
WITHIN GROUPS	43	584.00	13.58	
TOTAL	43	784.98		

*Significant at P=0.01

TABLE 13

MEANS AND STANDARD DEVIATIONS OF PHYSICAL EDUCATORS EXTRINSIC STRESS VARIABLES BY ABSENTEEISM

NUMBER OF DAYS ABSENT	N	MEANS	SD
NO DAYS ABSENT	33	22.61	6.49
ONE TO FIVE DAYS ABSENT	12	25.33	7.10
SIX TO TEN DAYS ABSENT	1	33.00	0
ELEVEN OR MORE DAYS ABSENT	1	43.00	0
TOTAL	47		

TABLE 14

SUMMARY OF ANALYSIS OF VARIANCE FOR EXTRINSIC STRESS VARIABLES BY ABSENTEEISM

SOURCE OF VARIATION	df	SS	MS	F-RATIO
BETWEEN GROUPS	3	527.37	175.77	3.97*
WITHIN GROUPS	43	1902,55	44.25	
TOTAL	46	2429.92		

*Significant at P=0.05